

Application No. 10/713,120
Amendment dated September 27, 2006
Response to Office Action of June 1, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please cancel claims 1-5 without prejudice

Amend claims 6, 9 - 21, as shown below.

Add claim 22-25 as shown below.

1. (cancelled)

2. (cancelled).

3. (cancelled)

4. (cancelled)

5. (cancelled).

6. (currently amended) A method for producing an electric heating cloth which is heated uniformly and is characterized by high reliability and high flexibility comprising the

steps of: interweaving a first group of flexible non-conducting threads arranged in a first direction with a single second group of flexible heating resistive threads arranged in a second ~~perpendicular~~ direction which is perpendicular to said first direction, each of said single second group of heating resistive threads characterized by a shell-nucleus structure wherein said nucleus is made of twisted flexible synthetic or glass fiber or fibers, said shell formed by dissolving a thermoplastic polymer in an organic solvent; adding an industrial carbon which is produced from acetylene to form a first mixture; grinding said first mixture; adding a colloidal graphite to said first mixture of thermoplastic polymer and organic solvent to form a second mixture; grinding said second mixture; coating a thread with said second mixture in a spinneret; and heating said ~~coated thread~~ coated heating resistive thread to remove said organic solvent.

7. (original) The method according to claim 6 wherein said thermoplastic polymer is polyvinylidene.

8. (original) The method according to claim 6 wherein said organic solvent is acetone.

9. (currently amended) The method according to claim 6 wherein said thermoplastic polymer is dissolved in said organic solvent in a ratio of ~~about~~ one mass part

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of said polymer to ~~about~~ six mass parts of solvent.

10. (currently amended) The method according to claim 6 wherein said industrial carbon is added to said thermoplastic polymer and said organic solvent in a ratio of ~~about~~ one mass part of said industrial carbon to ~~about~~ 2 two mass parts of said thermoplastic polymer.

11. (currently amended) The method according to claim 6 wherein said thread is a polyester thread of ~~about~~ 35 gauge AWG.

12. (currently amended) The method according to claim 6 wherein said thread is coated with said second mixture at ~~about~~ 20 °C and said thread is coated in said spinneret at a pulling speed of ~~about~~ 25 m/sec. m/min.

~~12.~~ 13. (currently amended) The method according to claim 11 wherein said thread has ~~about~~ 40 twists per meter (~~linear density: 28.6 tex (.0286 g/m))~~ and a linear density of .0286 g/m.

~~13.~~ 14. (currently amended) The method according to claim 6 wherein said coated thread is dried in a hot air stream at ~~about~~ 105 -110 °C.

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~~14.~~ 15. (currently amended) The method according to claim 6 wherein said thermoplastic polymer is dissolved in said organic solvent in a ratio of one mass part of polymer to ~~about seven~~ mass parts of solvent.

~~15.~~ 16. (currently amended) The method according to claim 6 wherein said industrial carbon is added to said thermoplastic polymer and said organic solvent in a ratio of ~~about 5~~ five mass ~~part~~ parts of said industrial carbon to ~~about 20~~ twenty mass parts of said thermoplastic polymer.

~~16.~~ 17. (currently amended) The method according to claim 6 wherein said thermoplastic polymer is dissolved in said organic solvent in a ratio of one mass part of polymer to ~~about 6.5~~ six and a half mass parts of solvent.

~~17.~~ 18. (currently amended) The method according to claim 6 wherein said industrial carbon is added to said thermoplastic polymer and said organic solvent in a ratio of ~~about 5~~ five mass ~~part~~ parts of said industrial carbon to ~~about 20~~ twenty mass parts of said thermoplastic polymer.

~~18.~~ 19. (currently amended) The method according to claim 6 wherein said thread

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is a twisted glass thread of ~~about~~ 20 gauge, 45 twists per meter (linear density: to tex (.050 g/m)) and is pull in said spinneret at a speed of ~~about~~ 15 m/min..

~~19:~~ 20. (currently amended) A method for producing an electric heating cloth which is heated uniformly and is characterized by high reliability and high flexibility comprising the steps of: interweaving a first group of non-conducting threads arranged in a first direction with a single second group of heating resistive threads, each of said single second group of heating resistive threads formed by dissolving a thermoplastic polymer in an organic solvent; adding an industrial carbon to said solution of thermoplastic polymer and organic solvent to form a first mixture; grinding said first mixture; adding a colloidal graphite to said first ~~product~~ mixture to form a second mixture; grinding said second mixture; coating a nucleus made of twisted flexible synthetic or glass fiber or fibers with said second mixture in a spinneret; and drying said coated thread to remove said organic solvent.

~~20:~~ 21. (original) The method according to claim 49 20 wherein said industrial carbon is produced from acetylene.

22. (new) The method according to claim 6 wherein each of said second group of

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heating conductive resistive threads has an outer diameter of less than 0.7 mm

23. (new) The method according to claim 6 wherein said interwoven threads are arranged in multiple heating zones.

24. (new) The method according to claim 6 wherein each of said heating resistive threads has a linear resistance in the range of 2.7 -1800 Ohm/cm.

25. (new) The method according to claim 6 wherein said interwoven non-conducting threads and said heating conducting resistive threads have linear densities of about 8-18 threads per centimeter of said cloth.